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EXAMINER	
NORTON, JENNIFER L	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/675,535	FARCHMIN, DAVID W.	
	Examiner	Art Unit	
	Jennifer L. Norton	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-23,25-46,48-54,56-60 and 62-69* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-23,25-46,48-54,56-60 and 62-69* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/21/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The following is a **Non-Final Office Action** in response to the Request for Continued Examination filed on 21 February 2007. Claims 1, 3-5, 23, 25, 26, 28, 29, 31, 37, 40, 41, 54, 57 and 64-66 have been amended. Claims 2, 24, 47, 55, 61 and 70 have been cancelled. Claims 1, 3-23, 25-46, 48-54, 56-60 and 62-69 are pending in this application.

Claim Objections

2. Claim 37 is objected to because of the following informalities:

Claim 37 includes the misspelling "there fore" in line 11.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claim 1, 3, 5, 7, 9, 11-23, 25, 26, 28-33, 35-42, 44, 48, 50, 51, 54, 56-60 and 62-69 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2005/0021158 (hereinafter De Meyer).

5. As per claim 1, De Meyer discloses an apparatus for use in an automated environment including at least a first automated assembly including a plurality of components that facilitate an automated process, at least one portable wireless information device (WID) and a controller for controlling the assembly, the apparatus comprising:

a first component (pg. 5, par. [0052] and Fig. 11, element AP1) that is one of the plurality of components (pg. 1, par. [0009], pg. 4, par. [0051]) and that is linked (Fig. 11, element CN) to the controller (pg. 3, par. [0028] and [0030] and Fig. 11, element CS) to facilitate at least a sub-process associated with the automated process (pg. 2, par. [0016] and pg. 7, par. [0071]), the first component including at least a first wireless receiver (pg. 3, par. [0025], i.e. receiver) for receiving wireless signals from the at least one WID (pg. 3, par. [0026], pg. 8, par. [0077] and Fig. 11, element MU); and

a processor (Fig. 11, element CS) receiving signals from the first receiver and running location determining software for determining the location of the at least one WID as a function of the signals received therefrom (pg. 8, par. [0077]);

wherein the first component is a stationary human-machine interface (HMI) device (pg. 3, par. [0024]) including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device (pg. 1, par. [0004] and [0009] and par. 3, par. [0023] and [0024], i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

6. As per claim 3, De Meyer discloses at least one of the automated assembly components includes a mounting surface accessible within the environment and proximate the automated assembly and wherein the HMI is mounted to the mounting surface (pg. 3, par. [0024]).

7. As per claim 5, De Meyer discloses the HMI includes the processor (Fig. 1, element CS) for determining location (pg. 8, par. [0077]).

8. As per claim 7, De Meyer discloses the first component (Fig. 11, element AP) is linked to the controller (Fig. 11, element CS) via a communication network and is also linked to the processor via the communication network (pg. 3, par. [0028], pg. 4, par. [0041] and pg. 7, par. [0071]).

9. As per claim 9, De Meyer discloses the processor (Fig. 11, element CS) is part of the controller (pg. 3, par. [0028] and [0030], pg. 5, par. [0077] and Fig. 11, element CS).

10. As per claim 11, De Meyer discloses the first receiver is juxtaposed proximate the automated assembly (pg. 3, par. [0024] and [0026] and Fig. 11, element AP5) and wherein the apparatus further includes at least a second receiver (pg. 8, par. [0077], Fig. 11, element AP6, i.e. receiving devices) positioned at a second location relative to the automated assembly (Fig. 11), the second receiver also providing received signals to the processor the processor determining WID location as a function of the signals received from each of the first and second receivers (pg. 8, par. [0077]).

11. As per claim 12, De Meyer discloses the environment includes at least a second automated assembly (Fig. 11, element OA3) controlled by the controller (Fig. 11, element CS) and including a second plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate an automated process (pg. 2, par. [0016]), the apparatus further including at least a second component (Fig. 11, element AP3) that is one of the second plurality of components and that is linked to the controller (Fig. 11, element CN), the second component including the second receiver (Fig. 11, element AP3, i.e. receiving devices) for receiving signals from the at least one WID and providing the received signals to the processor (pg. 8, par. [0077]).

12. As per claim 13, De Meyer discloses each of the first and second components are human-machine interfaces (HMIs) and each is linked to the controller via a communication network (pg. 8, par. [0077]).

13. As per claim 14, De Meyer discloses the processor is embedded within the first HMI and wherein the second HMI is linked to the first HMI via the communication network (pg. 8, par. [0077], i.e. HMI communication module).

14. As per claim 15, De Meyer discloses at least a third receiver (Fig. 11, element AP4, i.e. receiving devices) positioned at a third location relative to the first and second automated assemblies for receiving signals from the at least one WID (pg. 8, par. [0077]), the third receiver linked to the processor (Fig. 11, element CS) via the communication network (Fig. 11, element CN), the processor receiving signals from the first, second and third receivers and using the received signal to determine WID location (pg. 7, par. [0073]).

15. As per claim 16, De Meyer discloses a wireless data system (pg. 3, par. [0025] and pg. 8, par. [0077]), the data system including a plurality of access points (Fig. 11, element AP3-AP6), each access point including a receiver (i.e. "receiving devices") and a transmitter for receiving data from and transmitting data to the at least one WID, respectively (pg. 3, par. [0025]).

16. As per claim 17, De Meyer discloses at least a sub-set of the access points (Fig. 11, element AP3-AP6) generates location information and wherein the location information is provided to the processor via the communication network and used by the processor to determine WID location (pg. 8, par. [0077]).

17. As per claim 18, De Meyer discloses a wireless data system linked to the controller (Fig. 11, element CS) for transmitting data to and receiving data from the at least one WID (pg. 8, par. [0077]).

18. As per claim 19, De Meyer discloses the wireless data system includes data receivers that are separate from the first receiver (pg. 8, par. [0077] and Fig. 11, element AP3-AP6, i.e. receiving devices).

19. As per claim 20, De Meyer discloses the data system includes access points (Fig. 11, element AP3-AP6), each access point including one of the data receivers (pg. 8, par. [0077], i.e. "receiving devices") and also including a data transmitter (pg. 3, par. [0025]), information received by at least a sub-set of the data receivers provided to the processor (pg. 8, par. [0077]), the processor (Fig. 11, element CS) using the information from the sub-set of data receivers and the first receiver to determine WID location (pg. 8, par. 0077]).

20. As per claim 21, De Meyer discloses the first component also includes a first transmitter for transmitting data to the at least one WID (pg. 3, par. [0025]).

21. As per claim 22, De Meyer discloses the first component includes a transmitter for wirelessly transmitting data (pg. 3, par. [0025]).

22. As per claim 23, De Meyer discloses a system comprising:

a controller (Fig. 11, element CS) for controlling an automated assembly (pg. 3, par. [0028] and [0030]);

at least one portable wireless information device (WID) that transmits wireless signals (Fig. 11, element MU);

at least a first automated assembly (Fig. 11, element OA4) including a plurality of components that together facilitate an automated process (pg. 1, par. [0009], pg. 4, par. [0051], pg. 7, par. [0071]), the plurality of components including a first component (Fig. 11, element AP5) linked (Fig. 11, element CN) to the controller to facilitate at least a sub-process associated with the automated process (pg. 2, par. [0016] and pg. 7, par. [0071]), the first component including a wireless receiver (pg. 8, par. [0077], i.e. "receiving devices") for receiving signals from the at least one WID (pg. 8, par. [0077] and Fig. 11, element MU); and

a processor (Fig. 11, element CS) linked to the first component for obtaining signals from the receiver and running location determining software for determining the

location of the at least one WID (Fig. 11, element MU) as a function of the received signals (pg. 8, par. [0077]);

wherein the first component is a stationary human-machine interface (HMI) device (pg. 3, par. [0024]) including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device (pg. 1, par. [0004] and [0009] and par. 3, par. [0023] and [0024], i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

23. As per claim 25, De Meyer discloses at least one of the automated assembly components includes an accessible mounting surface and wherein the HMI is mounted to the mounting surface (pg. 3, par. [0024]).

24. As per claim 26, De Meyer discloses the HMI includes the processor (pg. 8, par. [0077]).

25. As per claim 28, De Meyer discloses the first receiver is juxtaposed proximate the automated assembly (pg. 3, par. [0024] and [0026] and Fig. 11, element AP5),

the system further including at least a second automated assembly (Fig. 11, element OA3) controlled by the controller (Fig. 11, element CS) and

including a second plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate a second automated process (pg. 2, par. [0016]), the second plurality of components including at least a second component (Fig. 11, element AP3) linked to the controller to facilitate at least a sub-process associated with the second assembly (pg. 3, par. [0077] and Fig. 11, element CN), the second component including a second receiver positioned proximate the second assembly (Fig. 11, element AP3, i.e. receiving devices), the second receiver providing received signals to the processor, the processor determining WID location as a function of signals received from each of the first and second receivers (pg. 8, par. [0077]).

26. As per claim 29, De Meyer discloses the second component is a human-machine interfaces (HMIs) (pg. 3, par. [0024]).

27. As per claim 30, De Meyer discloses the processor is embedded within the first component (pg. 8, par. [0077]).

28. As per claim 31, De Meyer discloses a location determining assembly for use in an automated environment including at least a first automated assembly (Fig. 11, OA4) including components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) that facilitate an automated process (pg. 2, par. [0016]), at least one portable wireless information device (WID) (pg. 8, par. [0077] and Fig. 11, element MU) and a controller

(Fig. 11, element CS) for controlling the assembly (pg. 3, par. [0028] and [0030]), the assembly comprising:

a first human-machine interface (HMI) (Fig. 11, element AP5) associated with the first automated assembly (pg. 5, par. [0052] and pg. 8, par. [0077]) and linked to the controller via a communication network (pg. 3, par. [0028] and [0030] and Fig. 11, element CN) for at least one of providing information thereto and receiving information therefrom, the HMI including an input device for receiving input directly from a human user of the HMI, a display for providing information directly to a human user of the interface device (pg. 1, par. [0004] and [0009] and par. 3, par. [0023] and [0024], i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.) and a first wireless receiver (pg. 8, par. [0077], i.e. "receiving devices") for receiving wireless signals from the at least one WID (pg. 8, par. [0077] and Fig. 11, element MU); and

a processor (Fig. 11, element CS) receiving signals from the receiver and running location determining software for determining the location of the at least one WID as a function of the signals received therefrom (pg. 8, par. [0077]).

29. As per claim 32, De Meyer discloses the environment further includes at least a second automated assembly (pg. 2, par. [0016] and Fig. 11, element OA3) controlled by the controller (Fig. 11, element CS) and wherein the assembly further includes a

second HMI (Fig. 11, element AP3) associated with the second automated assembly (pg. 5, par. [0052] and pg. 8, par. [0077]) and linked (Fig. 11, element CN) to the controller (Fig. 11, element CS) to at least one of provide information thereto and receive information therefrom (pg. 8, par. [0077]), the second HMI including a second wireless receiver (pg. 8, par. [0077], i.e. "receiving devices") for receiving wireless signals from the at least one WID (pg. 8, par. [0077] and Fig.11, element MU), the processor (Fig. 11, element CS) receiving signals form each of the first and second receivers and determining WID location as a function of the received signals (pg. 8, par. [0077]).

30. As per claim 33, De Meyer discloses the processor is embedded within the first HMI (pg. 8, par. [0077]).

31. As per claim 35, De Meyer discloses the processor provides WID location determination information to the controller and the controller uses the location information to perform a location dependent function (pg. 8, par. [0077]).

32. As per claim 36, De Meyer discloses the location dependent function includes one of providing location dependent information to the at least one WID and modifying control of the automated assembly (pg. 8, par. [0077]).

33. As per claim 37, De Meyer discloses a system for use in an automated environment including at least first and second automated assemblies (pg. 2, par. [0016], pg. 7, par. [0071], and Fig. 11, element OA3 and OA4) for performing first and second automated processes (pg. 5, par. [0052] and pg. 8, par. [0077]), at least one portable wireless information device (WID) (Fig. 11, element MU) and a controller (Fig. 11, element CS) for controlling the assemblies (pg. 3, par. [0028] and [0030]), the system comprising:

a wireless data communication system linked (Fig. 11, element CN) to the controller and for transmitting data to and receiving data from the at least one WID (pg. 8, par. [0077]);

a first human-machine interface (HMI) (Fig. 11, element AP5) linked (Fig. 11, element CN) to the controller to facilitate at least a sub-process associated with the first automated process (pg. 3, par. [0028] and [0030]) and including a first receiver for receiving signals from the at least one WID (pg. 8, par. [0077], i.e. "receiving devices"), the first HMI positioned proximate the first automated assembly (pg. 3, par. [0024]) for providing information related thereto directly to a human via a display device and receiving control instructions there fore directly from a human via an input device (pg. 1, par. [0004] and [0009] and par. 3, par. [0023] and [0024], i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.);

a second human-machine interface (HMI) (Fig. 11, element AP3) linked (Fig. 11, element CN) to the controller (Fig. 11, element CS) to facilitate at least a sub-process associated with the second automated process (pg. 3, par. [0028] and [0030]) and including a second receiver (i.e. "receiving devices") for receiving signals from the at least one WID (pg. 8, par. [0077] and Fig. 11. element MU), the second HMI positioned proximate (pg. 3, par. [0024) the second automated assembly for at least one of providing information related thereto and receiving control instructions there for (pg. 1, par. [0004] and [0009] and par. 3, par. [0023] and [0024], i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.); and

a processor (Fig. 11, element CS) receiving signals from the first and second receivers and running location determining software for determining the location of the at least one WID (Fig. 11, element MU) as a function of the signals received therefrom (pg. 8, par. [0077]).

34. As per claim 38, De Meyer discloses the wireless communication system (pg. 3, par. [0025] and pg. 8, par. [0077]) includes a plurality of access points (Fig. 11, element AP3-AP6).

35. As per claim 39, De Meyer discloses the system of claim 37 wherein the processor is embedded in the first HMI (pg. 8, par. [0077]).

36. As per claim 40, De Meyer discloses a method for use in an automated environment including at least a first automated assembly (pg. 2, par. [0016], pg. 7, par. [0071], and Fig. 11, element OA4), at least one portable wireless information device (WID) (Fig. 11, element MU) and a controller (Fig. 11, element CS) for controlling the assembly (pg. 3, par. [0028] and [0030]), the assembly including a plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate an automated assembly process (pg. 2, par. [0016], pg. 7, par. [0071], and Fig. 11, element OA4), the plurality of components including a first component (Fig. 11, element AP5) linked (Fig. 11, element CN) to the controller to facilitate an assembly sub-process (pg. 3, par. [0028] and [0030]), the method comprising the steps of: equipping the first component (Fig. 11, element AP5) with a wireless receiver (i.e. "receiving devices") for receiving wireless signals from the at least one WID (pg. 8, par. [0077]); receiving WID signals via the receiver (pg. 8, par. [0077]); and using the received signals to determine WID location (pg. 8, par. [0077]);

wherein, the first component is a stationary human-machine interface (HMI) device (pg. 3, par. [0024]) including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device (pg. 1, par. [0004] and [0009] and par. 3, par.

[0023] and [0024], i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

37. As per claim 41, De Meyer discloses the step of equipping includes embedding the receiver (i.e. receiving devices) in the HMI (pg. 8, par. [0077]).

38. As per claim 42, De Meyer discloses at least one of the automated assembly components includes a mounting surface accessible within the environment and proximate the automated assembly and wherein the method further includes the step of mounting the HMI to the mounting surface (pg. 3, par. [0024]).

39. As per claim 44, De Meyer discloses the step of using the received signals includes providing a processor as part of the HMI and using the processor to determine WID location (pg. 8, par. [0077]).

40. As per claim 48, De Meyer discloses the environment includes at least a second automated assembly (pg. 2, par. [0016], pg. 7, par. [0071], and Fig. 11, element OA3) controlled by the controller (Fig. 11, element CS), the second assembly including a plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate a second automated assembly process (pg. 5, par. [0052] and pg.

8, par. [0077]), the plurality of components including a second component (Fig. 11, element AP3) linked (Fig. 11, element CN) to the controller (Fig. 11, element CS) to facilitate an assembly sub-process (pg. 3, par. [0028] and [0030]), the method further including equipping the second component with a second receiver (i.e. "receiving devices") for receiving WID signals (pg. 8, par. [0077]), the step of receiving including receiving signals form each of the first and second receivers and the step of using the received signals to determine WID location including using the signals form each of the first and second receivers (pg. 8, par. [0077]).

41. As per claim 50, De Meyer discloses the step of using includes providing a processor (Fig. 11, element CS), linking the processor to the first component via a communication network (pg. 7, par. [0071] and pg. 8, par. [0077] and Fig. 11, element CN), transmitting the receiver signals (i.e. "receiving devices") via the communication network to the processor and performing an algorithm via the processor to determine WID location (pg. 8, par. [0077]).

42. As per claim 51, De Meyer discloses the step of linking additional receivers (i.e. "receiving devices") to the processor (Fig. 11, element CS), obtaining additional WID signals (Fig. 11, element AP3R-AP6R) via the additional receivers and providing the additional WID signals to the processor via the communication network, the step of

using further including using at least a sub-set of the signals received from each of the receivers to determine WID location (pg. 8, par. [0077]).

43. As per claim 54, De Meyer discloses a system for use in an automated environment including a plurality of automated assemblies (Fig. 11, element OA3 and OA4), each assembly including components that facilitate automated processes and at least one portable wireless information device (WID) (Fig. 11, element MU), the system comprising: at least a first processor (pg. 3, par. [0028] and [0030] and Fig. 11, element CS); a set of communication access points (Fig. 11, element AP3-AP6) configured to receive signals from, and transmit signals to, the WID (pg. 3, par. [0025] and pg. 8, par. [0077]; a set of wireless receivers (i.e. "receiving devices"), each wireless receiver integrated with a different component from a first sub-set of the assembly components and configured to receive signals from the WID (pg. 8, par. [0077]); and at least a first communication network (Fig. 11, element CN) linking at least a sub-set of the first subset component to the at least one processor and also linking each access point to the at least one processor (pg. 7, par. [0071]), the at least one processor obtaining WID signals from each of the receivers and also at least one of transmitting signals to, and receiving signals from, each of the first sub-set assembly components, via the at least a first network (pg. 8, par. [0077]).

wherein at least a sub-set of the first sub-set of the assembly components includes human-machine interfaces (HMIs) (pg. 3, par. [0024]), each HMI including at

least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device (pg. 1, par. [0004] and [0009] and par. 3, par. [0023] and [0024], i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

44. As per claim 56, De Meyer discloses at least one processor (Fig. 11, element CS) both transmits signals to and receives signals from at least a sub-set of the first sub-set of assembly components via the network (pg. 3, par. [0028] and [0030] and pg. 8, par. [0077]).

45. As per claim 57, De Meyer discloses the processor (Fig. 11, element CS) uses the obtained WID signals to determine WID location (pg. 8, par. [0077]).

46. As per claim 58, De Meyer discloses the processor (Fig. 11, element CS) also uses WID signals received from at least a sub-set of the communication access points (Fig. 11, element AP3-AP6) to determine WID location (pg. 8, par. [0077]).

47. As per claim 59, De Meyer discloses at least one processor (Fig. 11, element CS) includes at least a first processor (pg. 3, par. [0028] and [0030]) linked via the at least

a first network (Fig. 11, element CN) to the access points (Fig. 11, element AP3-AP6) and at least a second processor (pg. 8, par. [0077], i.e. "HMI communication module") linked via the at least a first network (Fig. 11, element CN) to the first sub-set of assembly components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) and wherein the at least a first network links the first and second processors together (pg. 7, par. [0071]).

48. As per claim 60, De Meyer discloses the first sub-set of assembly components (Fig. 11, element OA4) includes a first component (Fig. 11, element AP5) and wherein the second processor is integrated into the first component (pg. 8, par. [0077]).

49. As per claim 62, De Meyer discloses at least a first network (Fig. 11, element CN) includes at least a first network (Fig. 11, element CN) that links the communication access points (Fig. 11, element AP3-AP6) to the first processor (pg. 7, par. [0071]) and at least a second network that links the first sub-set assembly components to the second processor (pg. 1, par. [0006], pg. 3, par. [0024] and pg. 8, par. [0077], i.e. "HMI communication module").

50. As per claim 63, De Meyer discloses at least a first processor (Fig. 11, element CS) is remotely (pg. 3, par. [0028] and [0030]) located from the first sub-set assembly components (pg. 8, par. [0077]).

51. As per claim 64, De Meyer discloses a method for use in an automated environment including a plurality of automated assemblies (pg. 2, par. [0016], pg. 7, par. [0071], pg. 8, par. [0077], and Fig. 11, element OA3 and OA4), at least one portable wireless information device (WID) (Fig. 11, element MU) and at least one controller (Fig. 11, element CS) for controlling the assemblies (pg. 3, par. [0028] and [0030]), each assembly including a plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) provided to facilitate an automated assembly process (pg. 2, par. [0016] and pg. 7, par. [0071]), at least a first sub-set of the assembly components linked to the controller (Fig. 11, element CN) to at least one of provide signals thereto or receive signals therefrom (pgs. 2-3, par. [0016] and [0022]) and pg. 8, par. [0077]), the method comprising the steps of: equipping at least a sub-set of the first sub-set of assembly components with wireless receivers (i.e. "receiving devices") for receiving wireless signals from the at least one WID (pg. 8, par. [0077]); receiving WID signals via the receivers (pg. 8, par. [0077]); and using at least a sub-set of the received signals to determine WID location (pg. 8, par. [0077]).

wherein, the first component is a stationary human-machine interface (HMI) device (pg. 3, par. [0024]) including at least one of an input device for receiving input directly from a human user of the HMI and a display for providing information directly to a human user of the interface device (pg. 1, par. [0004] and [0009] and par. 3, par. [0023] and [0024], i.e. HMI interfaces are operator panels that are operated by an

operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.).

52. As per claim 65, De Meyer discloses the step of equipping includes embedding receivers (i.e. "receiving devices") in the assembly components (pg. 8, par. [0077]).

53. As per claim 66, De Meyer discloses a system for use in an automated environment including at least a first automated assembly (pg. 2, par. [0016], pg. 7, par. [0071], pg. 8, par. [0077], and Fig. 11, element OA3 and OA4) including a plurality of components (pg. 1, par. [0009], pg. 4, par. [0051] and pg. 7, par. [0071]) that facilitate an automated process (pg. 2, par. [0016] and pg. 7, par. [0071]) and a controller (Fig. 11, element CS) for controlling the assembly (pg. 3, par. [0028] and [0030]), the system comprising:

at least a first wireless information device (WID) (Fig. 11, element MU) including a transceiver (pg. 3, par. [0025]) and a first processor (Fig. 11, element CS);

a first component (Fig. 11, element AP5) that is one of the plurality of components that is linked to the controller (pg. 7, par. [0071] and Fig. 11, element CN) to facilitate at least a sub-process associated with the automated process (pg. 8, par. [0077]), the first component including at least a first wireless transmitter for transmitting wireless signals to the at least one WID (pg. 3, par. [0025]), a display device for presenting information directly to a human user and an input device for

receiving input directly from a human user (pg. 1, par. [0004] and [0009] and par. 3, par. [0023] and [0024], i.e. HMI interfaces are operator panels that are operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled.);

at least one receiver (pg. 8, par. [0077], i.e. "receiving devices"); and

at least a second processor linked to the first component (pg. 8, par. [0077], element "HMI communication module") and to the at least one receiver, the at least a second processor running a program to determine WID position as a function of signal strength data generated by the transmitter and the WID (pg. 8, par. [0077]);

wherein, the at least a first transmitter transmits signals of known signal strength to the WID (pg. 3, par. [0025]), the WID determines signal strengths and transmits signal strength data to the at least one receiver (pg. 8, par. [0077]) and the at least a second processor (Fig. 11, element AP5) obtains the signal strength data from the at least one receiver and uses the obtained data to determine WID position (pg. 8, par. [0077]).

54. As per claim 67, De Meyer discloses at least a first component (Fig. 11, element AP5) includes a plurality of components (pg. 3, par. [0025] and pg. 8, par. [0077]), each of the plurality including a separate transmitter (pg. 3, par. [0025]) and, wherein, the WID receives signals from at least a sub-set of the transmitters (pg. 3, par. [0025]),

determines signal strength and transmits the signal strength data to the receiver (pg. 8, par. [0077]).

55. As per claim 68, De Meyer discloses at least one receiver is separate from the at least one component (pg. 7, par. [0071] and pg. 8, par. [0077]).

56. As per claim 69, De Meyer discloses at least one receiver (i.e. "receiving devices") is a communication access point that is part of a wireless communication network (pg. 8, par. [0077]).

Claim Rejections - 35 USC § 103

57. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

58. Claims 4, 6, 10, 27, 34, 43, 45, 46, 49 and 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over De Meyer in view of U.S. Patent Publication No. 2003/0234741 (hereinafter Rogers).

59. As per claim 4, De Meyer does expressly teach the first receiver includes a wireless antenna.

Rogers teaches to the receiver includes a wireless antenna (pg. 3, par. [0033] and Fig. 3, element 320).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include a receiver with a wireless antenna to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

60. As per claim 6, De Meyer does not expressly teach the location determining software causes the processor to perform a statistical analysis on the received signals to determine WID location.

Rogers teaches to the location determining software causes the processor to perform a statistical analysis on the received signals to determine WID location (pg. 5, par. [0052] and [0055]).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the applicant's invention to modify the teaching of De Meyer to include the location determining software causes the processor to perform a statistical analysis on the received signals to determine WID location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

61. As per claim 10, De Meyer does not expressly teach the location determining software causes the processor to perform a statistical analysis on the received signals to determine WID location.

Rogers teaches a statistical analysis on the received signals to determine WID location (pg. 5, par. [0052] and [0055]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include a statistical analysis on the received signals to determine WID location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

62. As per claim 27, De Meyer does not expressly teach the location determining software causes the processor to perform at least one of a statistical analysis and a triangulation method on the received signals to determine WID location.

Rogers teaches to a statistical analysis (pg. 5, par. [0052] and [0055]) and a triangulation method (pg. 5, par. [0050] and [0054]) on the received signals to determine WID location.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include at least one of a statistical analysis and a triangulation method on the received signals to determine WID location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

63. As per claim 34, De Meyer does not expressly teach the processor performs at least one of a statistical analysis and a triangulation method on the received signals to determine WID location.

Rogers teaches to a statistical analysis (pg. 5, par. [0052] and [0055]) and a triangulation method (pg. 5, par. [0050] and [0054]) on the received signals to determine WID location.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include at least one of a statistical analysis and a triangulation method on the received signals to determine WID location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

64. As per claim 43, De Meyer does not expressly teach to the step of embedding includes integrating a wireless antenna with the HMI.

Rogers teaches to a wireless antenna (pg. 3, par. [0033] and Fig. 3, element 320).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include a wireless antenna to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

65. As per claim 45, De Meyer does not expressly teach the step of using the processor includes at least one of performing a statistical analysis and a triangulation method on the location information received from the receiver.

Rogers teaches to a statistical analysis (pg. 5, par. [0052] and [0055]) and a triangulation method (pg. 5, par. [0050] and [0054]) on the location information received from the receiver.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include a statistical analysis and a triangulation method on the location information received from the receiver to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

66. As per claim 46, De Meyer teaches the step of receiving additional WID signals via other receivers (i.e. "receiving devices"), providing the other received signals to the processor (Fig. 11, element CS and pg. 8, par. [0077])

De Meyer does not expressly teach to performing the statistical analysis on the received WID signals.

Rogers teaches to performing the statistical analysis on the received signals (pg. 5, par. [0052] and [0055]).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time of the applicant's invention to modify the teaching of De Meyer to include performing the statistical analysis on the received signals to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

67. As per claim 49, De Meyer does not expressly teach to the step of using includes performing at least one of a statistical analysis and a triangulation method on the received signals to determine WID location.

Rogers teaches to a statistical analysis (pg. 5, par. [0052] and [0055]) and a triangulation method (pg. 5, par. [0050] and [0054]) on the received signals to determine location.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include performing at least one of a statistical analysis and a triangulation method on the received signals to determine location to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

68. As per claim 52, De Meyer does not expressly teach the step of equipping includes providing a port on the first component for receiving a linkage, providing an antenna, mounting the antenna and linking the antenna to the first component port via a linkage.

Rogers teaches to a wireless antenna (pg. 3, par. [0033] and Fig. 3, element 320) Connected to a network access devices (Fig. 3, element 300).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include to a wireless antenna connected to a network access devices to enhance the resolution and accuracy of determination of the location of wireless network access point devices (pg. 3, par. [0030]).

69. As per claim 53, De Meyer teaches as set forth above the first component is a stationary human-machine interface (HMI) device (pg. 3, par. [0024]).

70. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over De Meyer in view of U.S. Patent Publication No. 2004/0235468 (hereinafter Luebke).

71. As per claim 8, De Meyer does not expressly teach the network is an Ethernet

network.

Luebke teaches to an Ethernet network (pg. 3, par. [0042]).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the applicant's invention to modify the teaching of De Meyer to include to an Ethernet network to minimizes latency by providing regional network coordinator (pg. 4, par. [0051]).

Response to Arguments

72. Applicant's arguments see Remarks pgs. 19-24, filed 21 February 2007 with respect to claims 1, 3, 5, 7, 9, 11-23, 25, 26, 28-33, 35-42, 44, 48, 50-51, 54, 56-60 and 62-69 under 35 U.S.C. 102(e) have been fully considered but they are not persuasive.

73. Applicant argues that the prior art fails to teach, "a system that includes HMIs that include wireless receivers and that can be used to either directly receive input from a human or to directly provide output to a human where received signals are used to determine the location of a wireless information device"; the examiner respectfully disagrees.

De Meyer discloses (pg. 1, par. [0004]) "The term "HMI device" is a generic term and includes all the components belonging to this group of devices, such as, e.g., operator panels (OP for short). These operator panels can be stationary or mobile devices. In a networked automation system, operator personnel use HMI devices to display and control process data of the technical installation to be controlled. This function is referred to as "supervisory control and data acquisition" (SCADA).
For this purpose, the HMI device usually has a special hardware structure, i.e., it is provided, for example, with a touch screen and is specially shielded against environmental influences. The HMI devices also use a special type of software, which provides functions to improve operational ease of use, quality and safety when the HMI devices are operated by an operator. For example, HMI devices can visualize, control, design and generate interactive process images or representations of the technical installation to be controlled. This makes it possible to selectively display responses of the technical installation, typically in the form of measured values and messages.
In addition, specific operator actions and data inputs make it possible to bring the technical installation into desired states."

(par. 3, par. [0024]) "This exemplary embodiment has the particular advantage that a compact HMI data module is available to carry out the steps of the method according to the invention. Advantageously, the HMI module is integrated directly into the technical installation and can be coupled thereto via a data bus. Without too

much complexity, this exemplary embodiment makes it possible to retrofit existing technical installations with an HMI data module. In addition, such a module can be replaced, e.g., when maintenance or service is due."

(pg. 8, par. [0077]) "**In contrast, in the exemplary embodiment of FIG. 11, emissions MUS of the mobile control and monitoring module MU are received, in a first step, by neighboring HMI communications modules, e.g., the modules AP5, AP6, and are analyzed to determine the position of the mobile control and monitoring module MU. The receiving devices in the HMI communications modules that are required for this purpose are configured, e.g., as GSM, GPRS or WLAN transmitting and receiving devices. The position is then determined by analyzing these emissions, either in an HMI communications module or in the central server.** As illustrated in FIG. 12, since the mobile control and monitoring module MU is now assigned to the regional control area OA4 and, thus, to the technical installation M4, data messages DAP6, which are provided by the central server CS, are transmitted, in a third step, to the mobile control and monitoring module MU. The transmission of the data messages DAP6 takes place, e.g., via the closest HMI communications module AP6, and the data messages DAP6 contain, in particular, associated HMI display data and/or HM initialization data."

Therefore, De Meyer discloses HMI interfaces are operator panels that are

operated by an operator to visualize, control, design, and generate interactive process images or representations of the technical installation to be controlled that include wireless receivers (i.e. receiving devices) to receive signals to determine the location of a wireless information device; hence De Meyer meets the claimed limitation as cited above.

74. Applicant argues that the prior art fails to teach, "there is no second processor separate from the device MU that determines the position of the device MU" and "the WID does not transmit signal strength information (instead the WID transmits emissions or short range fields that can be used by another process to generate signal strength information and to then use the signal information to determine WID location"; the examiner respectfully disagrees.

De Meyer discloses (pg. 8, par. [0076]) "In the exemplary embodiment of FIG. 8, the mobile control and monitoring module MU receives and analyzes, in a first step, short-range fields so as to determine the position of the module MU. These short-range fields are, in particular, emission signals of neighboring HMI communications modules. **In FIG. 8, these emission signals are, for example, emission signals AP5S, AP6S of the third and fourth HMI communications module AP5, AP6, in particular field strengths emitted therefrom.** In a second step, as illustrated in FIG. 9, the mobile control and monitoring module MU sends transmission messages

PAP6 to the closest HMI communications module AP6. The transmission messages PAP6 contain, in particular, position data, and the closest HMI communications module AP6 is, in this case, coupled to the end of the data bus or data network CN, for example. As illustrated in FIG. 10, since the mobile communications and monitoring module MU is now assigned to the regional control area OA4 and, thus, to the technical installation M4, data messages DAP6, which are provided by the central server CS, are transmitted, in a third step, to the mobile control and monitoring module MU. The transmission of the data messages DAP6 takes place, e.g., via the closest HMI communications module AP6, and the data messages DAP6 contain, in particular, associated HMI display data and/or HMI initialization data."

(pg. 8, par. [0077]) "**In contrast, in the exemplary embodiment of FIG. 11, emissions MUS of the mobile control and monitoring module MU are received, in a first step, by neighboring HMI communications modules, e.g., the modules AP5, AP6, and are analyzed to determine the position of the mobile control and monitoring module MU. The receiving devices in the HMI communications modules that are required for this purpose are configured, e.g., as GSM, GPRS or WLAN transmitting and receiving devices. The position is then determined by analyzing these emissions, either in an HMI communications module or in the central server.** As illustrated in FIG. 12, since the mobile control and monitoring module MU is now assigned to the regional control

area OA4 and, thus, to the technical installation M4, data messages DAP6, which are provided by the central server CS, are transmitted, in a third step, to the mobile control and monitoring module MU. The transmission of the data messages DAP6 takes place, e.g., via the closest HMI communications module AP6, and the data messages DAP6 contain, in particular, associated HMI display data and/or HM initialization data."

Therefore, De Meyer discloses a second processor (an HMI communications module or the central server) separate from the MU that determines the position of the device MU as highlighted above of pg. 8, par. [0077] of De Meyer; and the WID does transmit signal strength information as highlighted above of pg. 8, par. [0076] of De Meyer.

75. Applicant's arguments see Remarks pg. 24, filed 21 February 2007 with respect to claims 4, 6, 8, 10, 27, 34, 43, 45-46, 49 and 52-53 under 35 U.S.C. 103(a) have been fully considered but they are not persuasive.

76. Claims 4, 6, 8, 10, 27, 34, 43, 45-46, 49 and 52-53 stand rejected under 35 U.S.C. 103(a) as set forth in the Office Action and Response to Arguments above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to transmitting and receiving data to and from wireless devices.

U.S. Patent No. 7,139,557 discloses a system for delivery of services to at least one client program on a mobile device adapted to communicate in a wireless manner including a plurality of communication/detection devices.

U.S. Patent No. 7,136,711 discloses an access control system that is customized by a user.

U.S. Patent No. 7,126,535 discloses a method of transmitting communication signals from a first network node to a second network node.

U.S. Patent No. 7,136,657 discloses a service database stores a set of area information and a service program for each individual service.

U.S. Patent Publication No. 2006/0258371 discloses a network entity that includes a controller adapted to operate a location-based application for initiating a location reporting session.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Norton whose telephone number is 571-272-3694. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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